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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/748,720	12/26/2000	Byron J. Slater	00P9121US	4203

28524 7590 03/26/2004

SIEMENS CORPORATION  
INTELLECTUAL PROPERTY DEPARTMENT  
186 WOOD AVE. SOUTH  
ISELIN, NJ 08830

EXAMINER
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NGUYEN, DANNY

ART UNIT	PAPER NUMBER
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2836

DATE MAILED: 03/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/748,720

Applicant(s)

SLATER ET AL.

Examiner

Danny Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 and 24-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 32 and 33 is/are allowed.
- 6) ☒ Claim(s) 1-5, 25-29, 34, 35, 37 and 38 is/are rejected.
- 7) ☒ Claim(s) 24, 30, 31 and 36 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. In view of the appeal brief filed on 12/29/2003, PROSECUTION IS HEREBY REOPENED. A new ground rejections is set forth below

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chermin (USPN 4,181,872) in view of Martenson et al (USPN 6,040,971). Chermin discloses a protection circuit (see fig. 1 and 2b) apparatus connected between an AC electric utility power line and a load comprises a voltage input (terminal inputs 1 and 2) connected to

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the AC electrical utility power line, the AC power line having a normal voltage of about 120 volts (col. 2, lines 53-55); an inductor (inductor 8) connected between the voltage input line (the terminals 1 and 2) and the load (4). Chermin does not disclose the isolation protection circuit provides physically isolation between the circuit components. Martenson et al disclose a surge voltage protection circuit (e.g. protection circuit 30 shown in fig. 1 and 2) comprises a housing (32) provides physically isolation between the circuit components (30 and 40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the protection circuit of Chermin to incorporate with the isolation circuit as taught by Martenson et al in order to provide physical isolation to prevent circuit components (40) from catastrophic failure due to surge voltage condition (see col. 4, lines 17-18).

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chermin in view of Martenson et al, and further in view of Myong et al (USPN 6,356,424). The combination of Chermin and Martenson disclose a PTC resistor instead of a PPTC device as claimed. Myong discloses a protection circuit uses a PPTC resistor to protect excessive current and temperature (col. 1, lines 29-42). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have replaced the PTC resistor of the combination to use the PPTC device as taught by Myong because Myong teaches that PPTC devices have higher resistivities than PTC resistor (col. 1, lines 37-42).

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4. Claims 4, 25, 26, 28, 29, 34, 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chermin in view of Myong et al.

Regarding claims 4, 25, 26, 28, 29, 34, 37, Chermin discloses a surge protection circuit (fig. 1 and 2b) comprises a voltage input coupled to power line (1 and 2, col. 2, lines 52-54), an inductor (inductor 8), a separate resistor (resistor 6, see col. 4, lines 7-8) and a PTC device (7) are coupled in series (col. 2, lines 62-63) between the input voltage and the load (4). Chermin discloses a PTC resistor instead of a PPTC resistor. Myong discloses a protection circuit uses a PPTC resistor to protect excessive current and temperature (col. 1, lines 29-42). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have replaced the PTC resistor of the combination to use the PPTC device as taught by Myong because Myong teaches that PPTC devices have higher resistivities than PTC resistor (col. 1, lines 37-42).

Regarding claim 34, Chermin discloses a surge protection circuit (fig. 1 and 2b) comprises a voltage input coupled to the power line (col. 2, lines 52-54), an inductor (8) and a PTC resistor are coupled in series between the voltage input and the load (4), the inductor is interposed between the PTC resistor and the voltage input. Note that since the inductor 8 and the PTC resistor 7 are connected in series, they are inherently interchanged without affecting the result of the circuit. Chermin discloses a PTC resistor instead of a PPTC resistor. Myong discloses a protection circuit uses a PPTC resistor to protect excessive current and temperature (col. 1, lines 29-42). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have replaced the PTC resistor of the combination to use the PPTC device as taught by

Myong because Myong teaches that PPTC devices have higher resistivities than PTC resistor (col. 1, lines 37-42).

5. Claims 27 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chermin in view of Myong, and further in view of Carpenter et al (USPN 4,389,695). The combination of Chermin and Myong disclose all limitations of claims 4 and 37 except for having an axial lead resistor. Carpenter et al discloses surge voltage protection circuit (fig. 1 and 2) comprises an axial lead resistor (e.g. resistor 11A). It would have been obvious to one of ordinary skill in the art to have modified the protection circuit of the combination to use an axial lead resistor as taught by Carpenter in order to limit excess current on the transmission line.

6. Claims 2, 5, 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chermin in view of Myong et al, and further in view of Martenson et al. Chermin discloses a protection circuit (see fig. 1 and 2b) apparatus connected between an AC electric utility power line and a load comprises a voltage input (terminal inputs 1 and 2) connected to the AC electrical utility power line, the AC power line having a normal voltage of at least about 120 volts (col. 2, lines 52-54); a PTC device (PTC resistor 7) connected between the voltage input line (the terminals 1 and 2) and the load (4). Chermin does not disclose a PPTC device as claimed. Myong discloses a protection circuit uses a PPTC resistor to protect excessive current and temperature (col. 1, lines 29-42). It would have been obvious to one of ordinary skill in the art at the time the

invention was made to have replaced the PTC resistor of Chermin to use the PPTC device as taught by Myong because Myong teaches that PPTC devices have higher resistivities than PTC resistor (col. 1, lines 37-42). However, the combination of Chermin and Myong do not disclose a protective barrier as claimed. Martenson et al disclose a surge voltage protection circuit (e.g. protection circuit 30 shown in fig. 1 and 2) comprises a housing (32) provides physically isolation between the circuit components (30 and 40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the protection circuit of Chermin and Myong to incorporate with the isolation circuit as taught by Martenson et al in order to provide physical isolation to prevent circuit components (40) from catastrophic failure due to surge voltage condition (see col. 4, lines 17-18).

***Allowable Subject Matter***

7. Claims 32-33 are allowed.

Claims 24, 30, 31, 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 24, 30-32, 36 recite a surge protection circuit connected between a power line and a load comprises a protective barrier which includes a protective sleeve is configured to physically isolate the inductor from the load.

The references of record do not teach or suggest the aforementioned limitation, nor would it be obvious to modify those references to include such limitation.

***Response to Arguments***

8. Applicant's proposed arguments filed 12/29/2003 have been fully considered but they are not persuasive.

Regarding claim 2, applicant argued that there is no motivation to combine Chermin and Myong.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Chermin teaches that a protection circuit in figure 1 comprises a PTC resistor 7 protects over-temperature (col. 3, lines 46-50). Myong teaches using a PPTC resistor to protect excessive current and temperature because PPTC resistors have higher resistivities (col. 1, lines 29-42). One of ordinary skill in the art would have recognized the benefits of the PPTC devices to all protection circuits. The teaching should not be narrowly construed and therefore would provide motivation to a designer as well.

Applicant argued that there is no motivation to combine Chermin and Myong.

Chermin teaches that a protection circuit in figure 1 comprises a series arrangement which includes a resistor 6, a PTC resistor 7, and an inductor 8 protects excessive current and surge voltage (col. 2, lines 62-63, col. 3, lines 46-50 and figure



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2b). Martenson discloses a surge voltage protection 30 which has a housing 32 prevent device 20 from catastrophic failure (col. 4, lines 16-17 and figures 1 and 2). Since protecting an electrical system from catastrophic failure due to excessive over-voltage is important (col. 2, lines 1-3). One of ordinary skill in the art would have recognized the benefits of Martenson's teaching and therefore would provide motivation to a designer as well.

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Danny Nguyen whose telephone number is (571)-272-2054. The examiner can normally be reached on Mon to Fri 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (571)-272-2058. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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3/1/2004

  
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